

MANUAL

CK-79

(Optional; KURF Roll Feed)



WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

CONAIR MARTIN

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1. Introduction

This manual is for CONAIR MARTIN'S granulators 79 -K, -KU, -KURF, where

K = Noise protection

U = Suction blower

RF = Roll Feed



This manual **must** be studied carefully before installing and using the equipment, in order to prevent personal injury and damage to machinery.



Always take great care when the knives are within reach, since they are very sharp and can cause personal injury.

CONAIR MARTIN granulators are built for granulation of injection moulded, blow moulded or extruded plastic waste where the granulator's size and performance corresponds to the type of waste. For any other products or materials, approval must be obtained from the dealer or head-office in order for the conditions of the guarantee to remain valid.

The different types of granulator are designed so that maintenance and cleaning can be carried out quickly and simply, both during routine maintenance as well as when changing colour or material.

All servicing work should be carried out by a person with technical training or corresponding professional experience. The manual contains instructions for both handling and servicing the granulator. Chapter 7, which contains servicing instructions, is intended for service engineers. Other chapters contain instructions for the daily operator.

Delivered with the granulator are a manual, tool kit and touch-up paint.

Any modifications, changes, or rebuilding of the granulator must be approved by CONAIR MARTIN in order to avoid personal injury and damage to machinery and to ensure that the documentation remains correct.

If you have any questions, please contact your local dealer or our head-office.

2. Technical specifications

2.1 Dimensions

See chapter 10, Layout.

2.2 Data

Serial Number _____

Motor power _____

Capacity _____

V-belts _____

Voltage _____

Cutter-housing opening _____

Rotating knives _____

Fixed knives _____

Screen _____

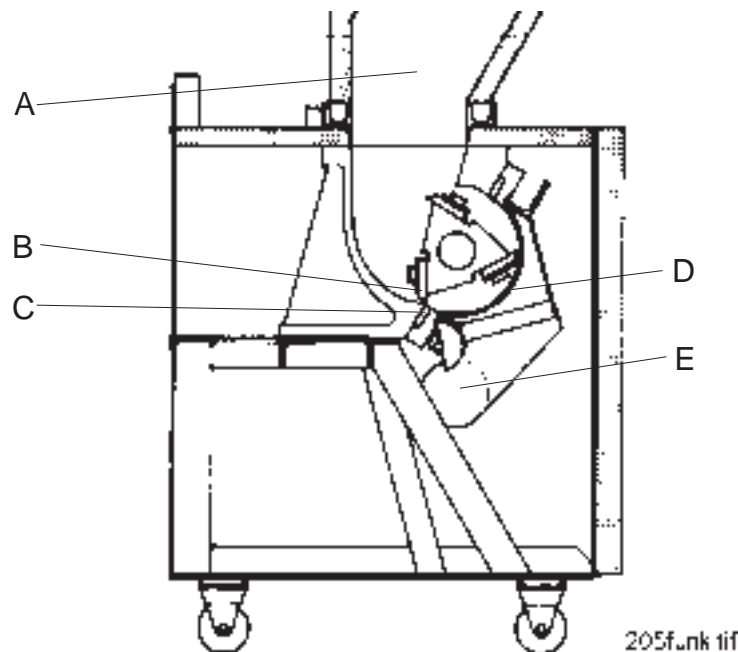
Weight _____

3. Functional description

3.1 Overview

The various models of 79 granulators are designed for grinding different types of plastic waste.

The granulator is controlled from an electrical cabinet with a start/stop function and an emergency stop button.



The sound levels of the granulators are specified, together with other technical data, in chapter 2.

The material is fed into the hopper (A) and falls down to the rotor. The rotor's knives (B) grind the material against the fixed knives (C) in the cutter housing. Both the fixed and rotating knives can be changed or re-sharpened when necessary. The sharpening is carried out in a special fixture outside of the granulator.

Under the rotor is a screen (D) through which the granulate passes before it comes down into the granule bin. The screen is available with various hole sizes depending on the required degree of coarseness of the granulate.

The granulated material is then collected in the granule bin (E). On the standard -K model, the operator must open the front door and take out the granule bin to empty it, which means that the granulator stops. To avoid this type of operating delay, the granulators can be supplied with a blower system. See chapter 11, Options.

The granule bin, screen and screen box are designed to be removed so that the rotor can easily be cleaned. The hopper is constructed so that it can be opened up to allow improved access for cleaning and maintenance.

3.2 Safety system

Since there are rotating knives inside the granulator, there is a built-in safety system to prevent personal injury.

Emergency stop: The equipment is fitted with an emergency stop switch on the control panel. The emergency stop is activated by pushing the button. It is reset by turning the button in the direction of the arrow (anti-clockwise).

Safety switches: The safety system includes 2 safety switches. The switches are located as follows:

- 1 by the hopper
- 1 by the screenbox

The system is designed so that you have to unscrew the break screw by the screenbox to be able to open it. The break screw actuates the safety switch, which cuts off the power so that the rotor stops before the screenbox can be opened.

The hopper must be lowered and locked before the granulator can be operated. The safety switch has been installed so that it is not possible to start the granulator when the hopper is open.

4. Safety regulations

4.1 Overview

CONAIR MARTIN granulators are built for granulation of injection moulded, blow moulded or extruded plastic waste, which must not exceed the granulator's size and performance as described in chapter 2. Regarding the 79, see chapter 11, Options.

The granulator is equipped with safety switches to prevent the front door and the hopper from being opened during operation.

The following safety measures should always be observed when handling the granulator:

- **WARNING! High Voltage! The electrical installation work must only be carried out by authorised personnel!**
- **Always switch off the power supply using the main circuit-breaker (on top of the electrical cabinet) before opening the granulator. WARNING! High voltage remains on the incoming phase's connection block and up to the main circuit-breaker!**
- **Never put any part of your body into any openings on the granulator unless the main circuit-breaker is in the "OFF" (=0) position.**
- **Always be careful when the knives are in reach since they are very sharp. When the rotor has to be rotated manually, this must be done with the greatest care!**
- **Be careful when the hopper and screenbox are opened and closed so that no part of your body gets caught.**
- **The granulator cannot be started until the doors and the hopper are locked.**



= **WARNING! High Voltage!**

This sign is placed on the electrical cabinet's door and any connection boxes.



= **WARNING! Risk of being cut or caught in the machinery!**

This sign is placed as necessary next to dangerous parts, for example the hopper and screenbox.

As long as the instructions in this manual are followed carefully, there should be no other dangers.

5. Installation

All instructions must be carried out in the order described, to prevent personal injury or damage to machinery.



Always take great care when handling the knives since they are very sharp and can cause personal injury.

The granulator should be connected to the mains supply by an authorised electrician.

5.1 Pre-start checks

- Before the granulator is installed, the rust preventive should be carefully cleaned from the parts which are not painted or rustproof.
- Check the knife clearance and tightening torque on the attachment bolts for the knives.

5.1.1 Two hours after first start

Check the knife clearance again and tightening torque of the attachment screws for knives; check the attachment screws for both the fixed and rotating knives.

5.2 Opening and closing the hopper and screenbox

Screenbox:

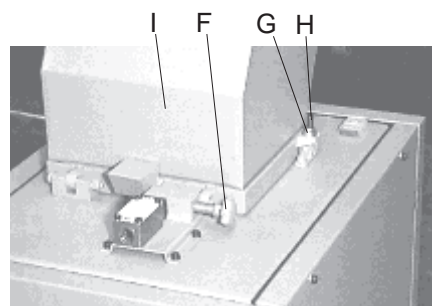
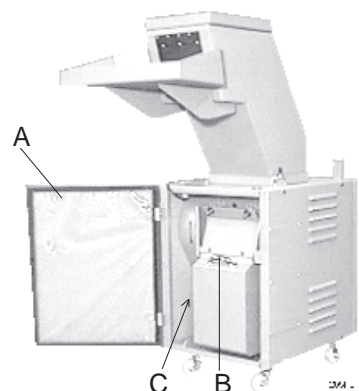
1. Open the front door (A).
2. Pull out the granule bin (B). On the -KU model, a quick-coupling ring by the granule bin's outlet flange must first be loosened.
3. Unscrew the breakscrews (C) until the door's stop plate is released. A safety switch is then activated, which cuts off the current to prevent the machine from being started when the screenbox is open.
4. Loosen the nuts (D).
5. Raise the link screws (E).
6. Lower the screenbox and lift out the screen.

NOTE: When mounting the screenbox the link screws' nuts (D) must be tightened quite hard to avoid only one of the link screws taking the whole load.

Hopper:

1. Unscrew the break screws (F) on the back of the hopper.
2. Loosen the nuts (G).
3. Lower the link screws (H).
4. Raise the hopper (I).

Opening the hopper with the roller pack (RF) installed is described in chapter 11.



5.3 Electrical connection



The granulator should be connected up by an authorised electrician.

Connect the granulator to the mains supply. See Electrical scheme, chapter 9, connecting (Q1).

All connected electric motors have been set up with the intended rotation direction by setting up the internal electrical connection for clockwise rotating field.

- Using a phase-sequence indicator, check that the incoming phases are connected to the granulator so that the intended, clockwise rotating field is maintained.

6. Operation and daily maintenance

6.1 Starting and stopping

The start and stop functions are controlled by a push-button on the electrical cabinet.

NOTE: The granulator should not be stopped until it has finished grinding all the material in the hopper and cutter housing. Any remaining material can slow down the rotor when it is re-started which can overload the motor and trigger the overload protector (See 6.4).

6.2 Inspection

There should **not** be any material in the granulator when the inspection is to be carried out.

6.2.1 Daily inspection

- **Flaps in the hopper.** (-K and -KU only). Check that the flaps are not damaged. Damaged parts should be replaced immediately to prevent bits of the flaps from falling into the cutter housing and damaging the knives. There is also a risk that damaged flaps can be thrown back by the machine.
- **Emergency stop.** Check the emergency stop function by starting the granulator and then stopping it using the emergency stop button. The emergency stop is reset by turning the emergency stop button in the direction of the arrow. The machine can then be re-started by pressing "START".

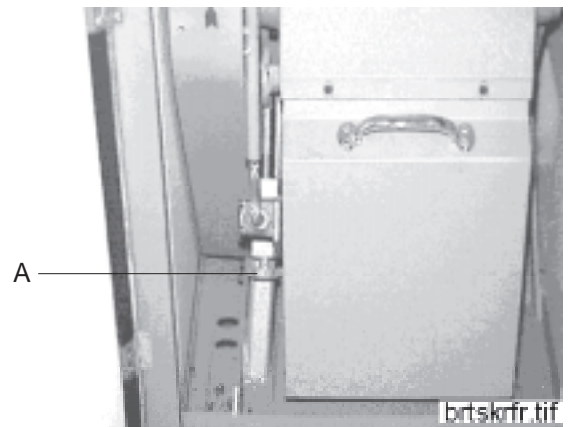
6.2.2 Weekly inspection

- **Cables.** Inspect all cabling in the machine to see that there is no wear or other damage. For reasons of personal protection, damaged parts should be replaced immediately.
- **Safety switches.** There are two safety switches, one for the screen box and one for the hopper:

Screenbox: Check the safety switch by starting the granulator and then unscrewing the break screw (A) on the front of the stand, as described in chapter 5.2. The granulator should have stopped before you are able to open the screenbox.

Hopper: (-K and -KU) Open the hopper as described in chapter 5.2, but close and lock the screenbox. Check the safety switch to the hopper by starting the granulator. It should not be possible to start the granulator until the hopper is lowered and the break screws are screwed in.

Regarding roll feed, see chapter 11, Options.



6.3 Cleaning



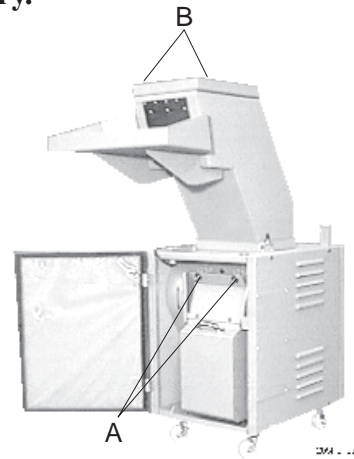
NOTE: Set the main circuit-breaker to position "0" when cleaning the granulator.

Empty the granulator of all material before re-starting.



Always take great care when handling the knives since they are very sharp and can cause personal injury.

1. Remove the top part of the hopper by loosening the two screws (B).
2. Lift out the flaps.
3. Open the hopper and screenbox as described in chapter 5.2.
4. Clean the hopper, flaps, screen and screenbox and granule bin.
5. Clean the cutter-housing and inside the stand.
6. Replace all parts in reverse order.



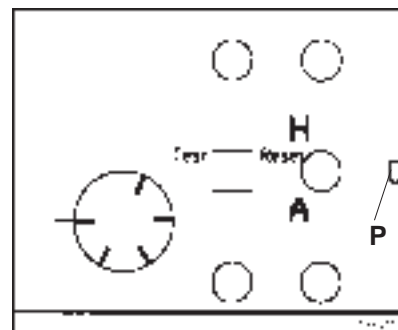
NOTE: When mounting the screenbox the link screws' nuts (D) must be tightened quite hard to avoid only one of the link screws taking the whole load.

Note: Steps 4 - 6 should be carried out every time the machine is cleaned, or at least once every 300 hours.

6.4 Trouble-shooting

6.4.1 If the granulator does not start

- Check that the safety switches' break screws are turned fully clockwise. It is not possible to start the granulator unless the break screws are screwed in.
- Check that the emergency stop is not activated. It can be reset by turning the button in the direction of the arrow.
- The bimetal relay F1 in the electrical cabinet, according to the diagram opposite, is released if you press stop or overload the granulator. This is indicated by the small green rectangular pin (P), which sticks up above the surface of the bimetal relay. When you reset by pressing the "Reset" button, the pin (P) is pushed back in so that it is level with the surface of the bimetal relay.



7. Servicing

All servicing work should be carried out by a qualified service engineer and in the order described, to prevent personal injury or damage to machinery.

7.1 Changing the knives

When changing the knives, also check for any wear to the screen. For safety reasons, this should be replaced when the holes in the screen become drop-shaped.



Always take great care when handling the knives since they are very sharp and can cause personal injury. Use protective gloves!

7.1.1 Changing the fixed and rotating knives

For safety reasons, damaged screws *must* be replaced.

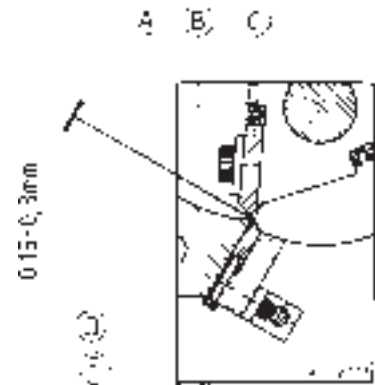
- Open the screenbox as described in chapter 5.2.
- Release the right side hood by loosening the four screws.

Disassembling the rotating knives (C):

1. Remove the fastening screws (A) and washers (H).

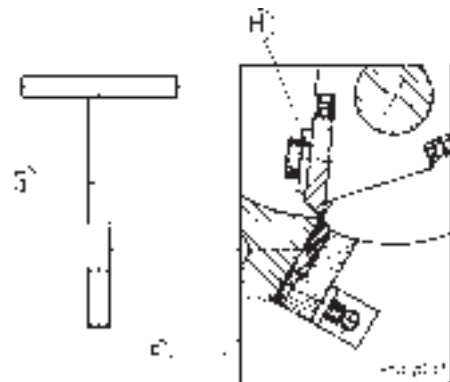
Disassembling the fixed knives:

1. Loosen screws (E), 5 on each long side and 2 on the short side opposite the belt guard, total 12 pieces.
2. Remove the screws (D), 2 on each fixed knife.
3. Loosen the stop screws (F), 2 on each fixed knife.
4. Screw the special extractor (G) (in the tool kit) into the threaded hole on the knife end and pull out the knife.



Assembling the lower fixed knife:

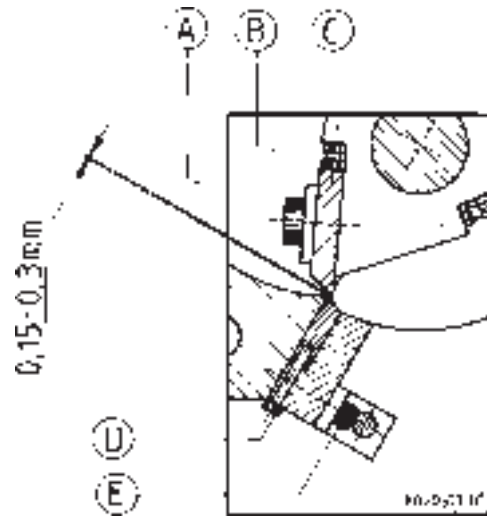
1. Check that the knives and the grooves for the knives are free from plastic waste, grease, etc.
2. Place the lower fixed knife in position.
3. Adjust the lower fixed knife to its forward position using the adjusting screws (F).
NOTE: These screws should only support the rear edge of the knife and should not be tightened so much that the knife bends.
4. Tighten the 5 screws (E) (in the diagram above) along the lower long side with a torque of 20 Nm.
5. Screw in and tighten the screws (D).



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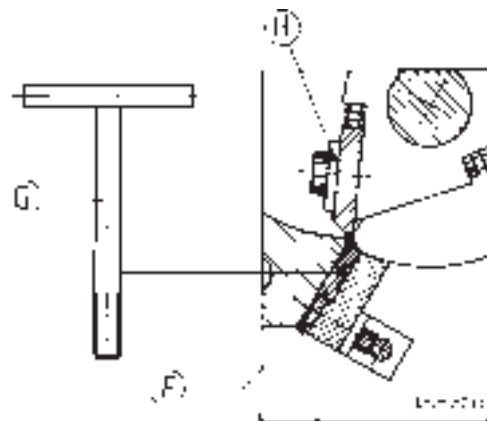
Assembling the rotating knives

1. Clean the cutter's knife location and place a rotating knife in the knife location.
2. Fasten the screws (A) together with the washers (H) and tighten gently.
3. Adjust the knife using the setting screws (B) to give the correct amount of play, 0.15-0.30 mm, between the fixed and rotating knives. Check using the feeler gauge included in the tool kit.
4. When the correct amount of play has been obtained, tighten the screws (A) using a torque of 200 Nm.
5. Tighten the counter nut.
6. Re-check the amount of play.



Assembling the upper fixed knife

7. Push the upper fixed knife into its groove.
8. Turn the cutter so that the rotating knife's cutting edge comes exactly in front of the upper fixed knife's cutting edge.
9. Adjust the fixed knife using the setting screws (D) and (F). By tightening screw (F) the knife is moved *towards* the cutter's centre. By tightening screw (D) the knife is moved *away from* the cutter's centre.
10. Tighten the 5 screws (E) along the upper long side, and the two that were loosened on one short side.
11. Check that screws (D) and (F) by the upper fixed knife are not loose. However, they should not be tightened too much.
12. Rotate the rotor and replace the other rotating knives according to steps 1 - 5 above.
13. Using a feeler gauge, check that the distance between the fixed and rotating knives is correct. The distance should not be less than 0.15 mm.



Granulator fitted with a third fixed knife:

See instructions in chapter 11.

7.2 Sharpening the knives



Always take great care when sharpening the knives since they are very sharp and can cause personal injury.

7.2.1 Overview

NOTE: Use the services of a skilled person when re-sharpening the knives and only sharpen the edges marked with the special sign! (see diagram under 7.2.2 and 7.2.3)

The knives must be sharpened so that the correct grinding angles are obtained, otherwise the granulator will not operate effectively with lightly cutting knives.

During sharpening, the knife must be cooled the whole time with plenty of water and must definitely not burn or start blueing on the edge since this means that the knife lacks durability and stability. If this occurs, the knife cannot be repaired by further grinding down or grinding away of the blued or burnt colour. The tempered knife may have deep deformations with possible cracking as a consequence.

The following instructions apply only if you are using CONAIR MARTIN'S sharpening fixture SF 79. The sharpening fixture is intended for use in a surface grinding machine and should be fixed on a magnetic board.

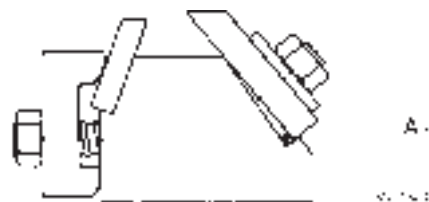
7.2.2 Sharpening the fixed and rotating knives

Fixed knives:

Regarding the third fixed knife, see chapter 11.

NOTE: Only the surfaces marked with the special sign should be sharpened. The specified measurements apply when sharpening the knives.

- The fixed knives are fastened as shown in the adjacent figure, left part, and the cutting angle is sharpened at 20° .



- The knives can be sharpened only as much as is shown in the adjacent figure. After that, they are worn out and should be replaced by new ones in order for the granulation to be effective.

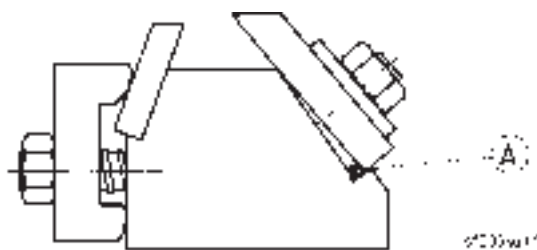


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Rotating knives:

NOTE: All rotating knives should be sharpened equally so that the cutter does not become unbalanced.

- The rotating knife is fastened with the stirrup (A) under the lower part of the knife, as shown in the adjacent figure, right part. Ball washers should be used when tightening. In this position the relief angle is sharpened.
- Loosen the screws and remove the stirrup (A), fasten the knife again. In this position the cutting angle is sharpened.
- The knives can be sharpened only as much as is shown in the adjacent figure. After that, they are worn out and should be replaced by new ones in order for the granulation to be effective.

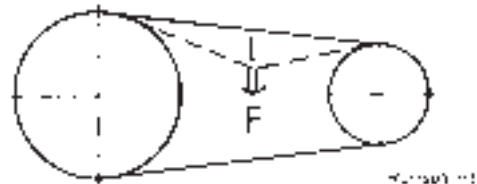


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7.3 Inspecting and adjusting the belts

The V-belts must be inspected after 30 hours' operation after installation and from then on every 6 months.

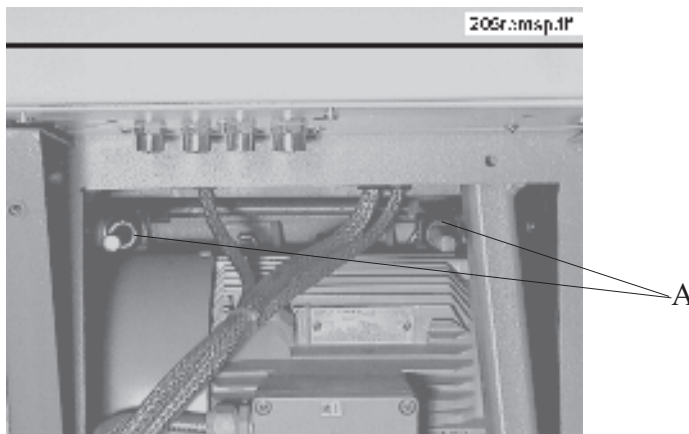
- Loosen the left side hood, as viewed from the front door, by unscrewing the four socket-head screws.
- Load one of the V-belts between the rotor pulley and the motor pulley with 25 N in the middle of and at a right angle to the belt. Measure the deflection and adjust the distance between the pulleys as necessary until the tension is correct. The V-belt should stretch 6 mm.
- Replace all belts if any of them are cracked.



$$F = 25 \text{ N}$$

$$l = 6 \text{ mm}$$

Adjusting:



- Loosen the rear hood by unscrewing the four socket-head screws.
- Tension the belt by screwing on the flange nuts (A).

7.4 Lubrication

The bearing is delivered filled with grease. The bearing is maintenance-free and needs no further lubrication.

7.5 Rotor pulley, assembling/disassembling

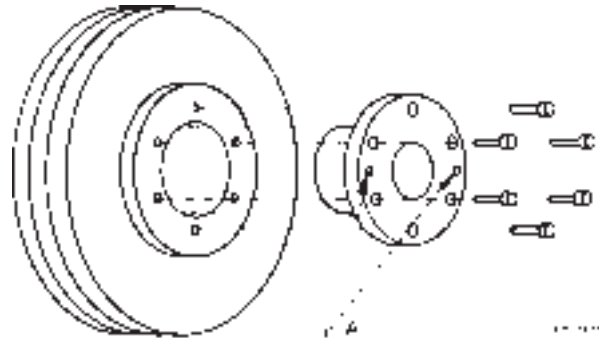
7.5.1 Rotor pulley

Disassembling

1. Loosen all screws a few turns.
2. Unscrew two of the screws.
3. Lubricate both screws and screw them into the disassembling holes (A).
4. Tighten both disassembling screws alternately until the flange bushing comes loose from the hub and the unit sits freely on the axle.
5. Lift the whole unit from the axle.

Assembling

1. Clean and degrease the contact surfaces carefully.
2. Place the "flange bushing" in the hub so that the bolt holes line up with each other.
3. Lubricate the screws. Fit all screws without tightening them completely.
4. If a key is used, it should be placed in the key way before the "flange bushing" is fitted in. Check that there is sufficient play over the key.
5. Fit the hub with the "flange bushing" on the axle.
6. Tighten the screws alternately until approximately half the torque has been reached ($49/2=24.5\text{Nm}$).
7. Tap lightly between the axle and the bolts on the "flange bushing". Use a block of wood or plastic to protect against damage.
8. Continue to alternately bolt and tighten the screws once or twice until the correct torque has been reached, i.e. 49 Nm.



8. Spare parts list

8.1 Overview

Use only spare parts from CONAIR MARTIN when replacing machine parts. Orders should go to the representative in the country where the machine was purchased.

When ordering, the following should be specified:

- machine designation, as specified on the machine plate
- serial number, as specified on the machine plate
- article number, as specified in this spare parts list
- quantity, as specified in this spare parts list.

To be as clear as possible, the spare parts list is divided into modules. Each module illustrates a particular part of the granulator.

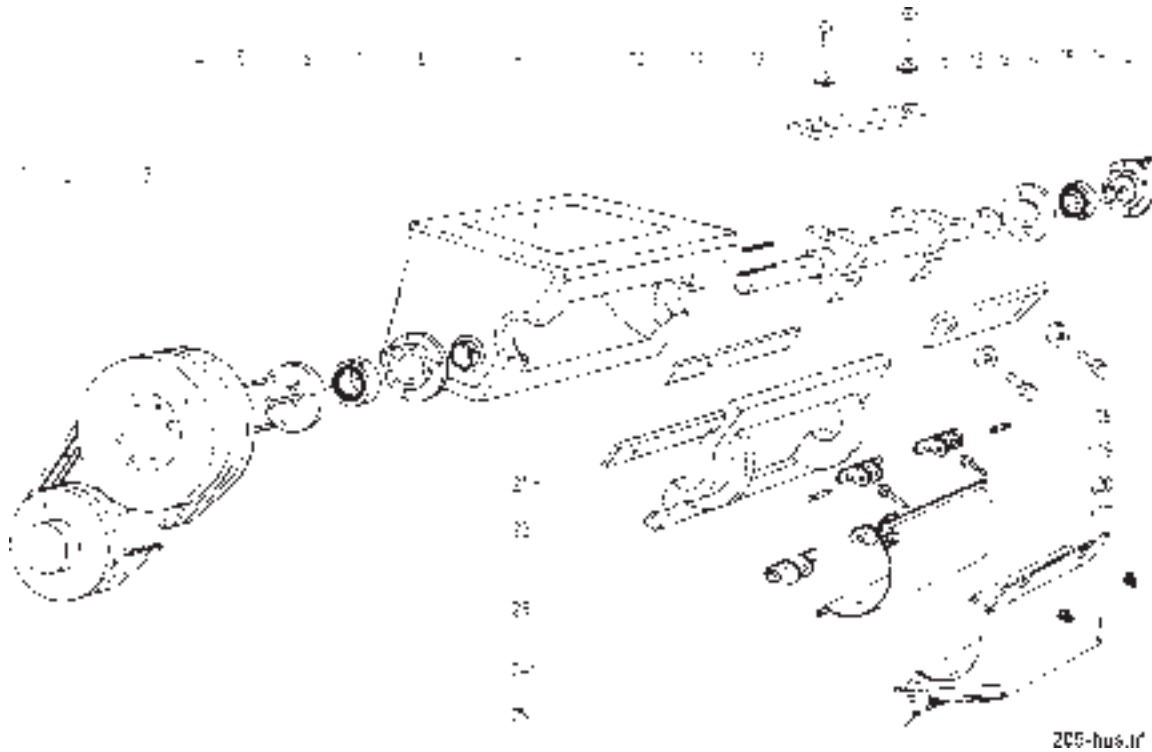
The granulator is divided into the following modules:

	Page
8.1.1 Cutter housing	19-20
8.1.2 Type -K	21
8.1.3 Type -KU	22

Options are described in chapter 11.

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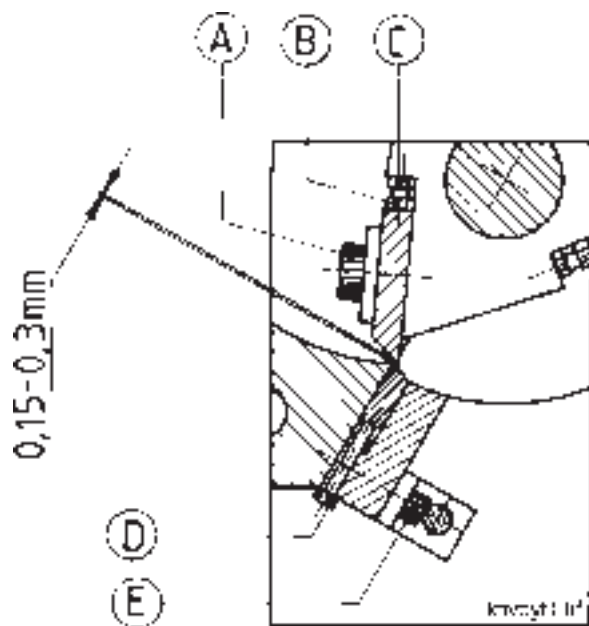
8.1.1 Cutter housing



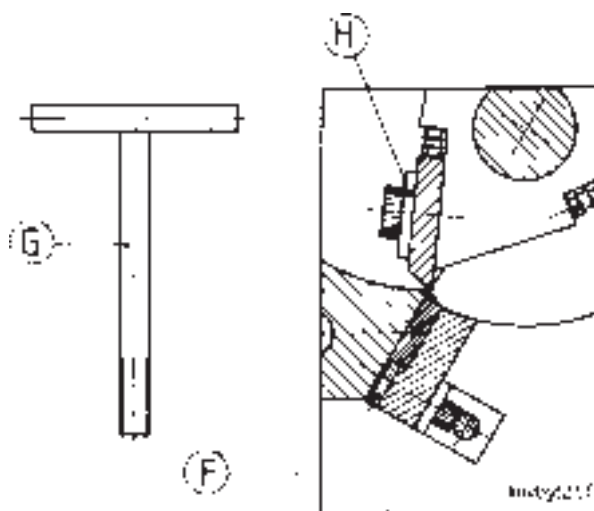
Pos	Qty.	Part no.	Pos	Qty.	Part no.	Pos	Qty.	Part no.
1	1	9-30049	10	1	9-50082	19	2	4-02411
2	3	9-30166	11	1	2-14198	20	2	9-50066
3	1	9-30092	12	3	3-08107	21	2	4-08108
4	6	9-40054	13	1	4-02406	22	1	2-02534
5	1	4-02403	14	1	4-02408	23	2	4-02409
6	2	9-60034	15	1	9-40139	24	1	3-02414
7	1	4-02405	16	1	4-02404	25	1	2-09135
8	2	4-02407	17	2	9-40158			
9	1	2-02534	18	2	4-02412			

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8.1.1 Cutter housing, continued

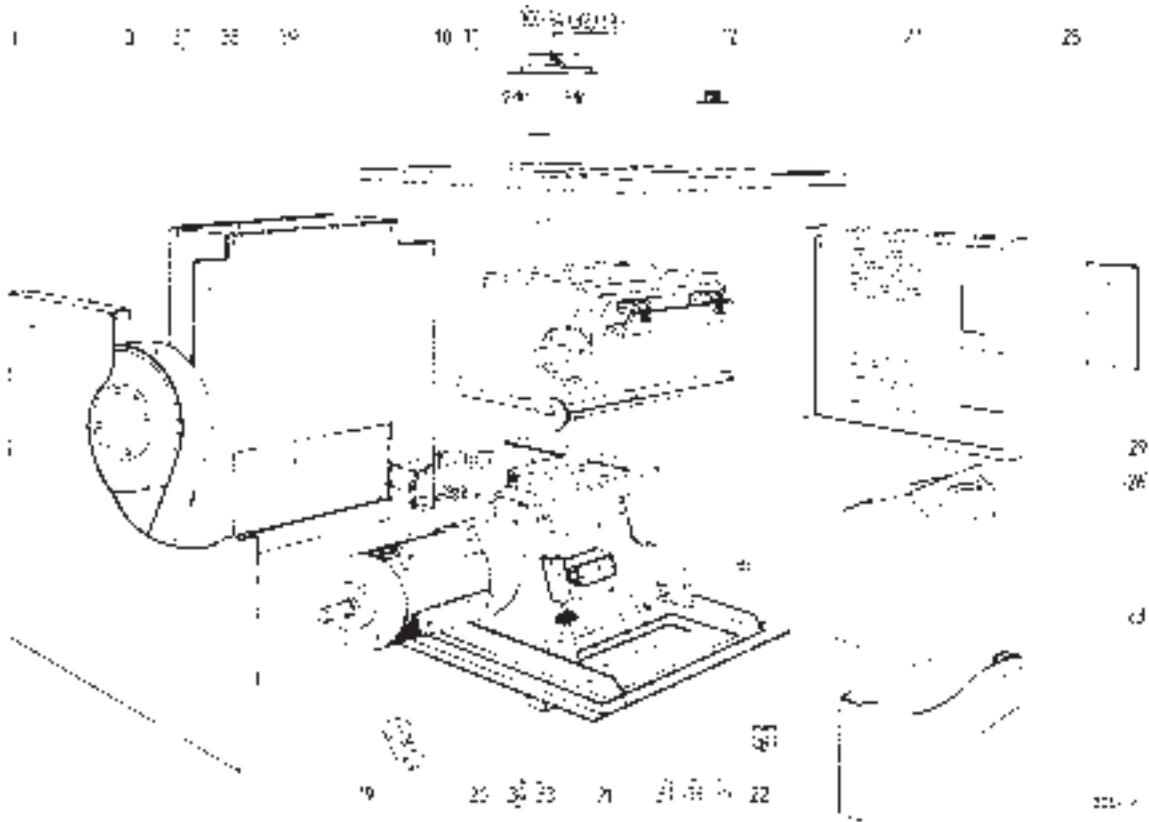


Pos	Qty.	Part no.
A	6	9-40165
B	6	9-40150
C	6	9-40203
D	4	9-40161
E	6	9-40140
E	8	9-40054
F	4	9-40160
G	1	4-02531
H	6	4-11835



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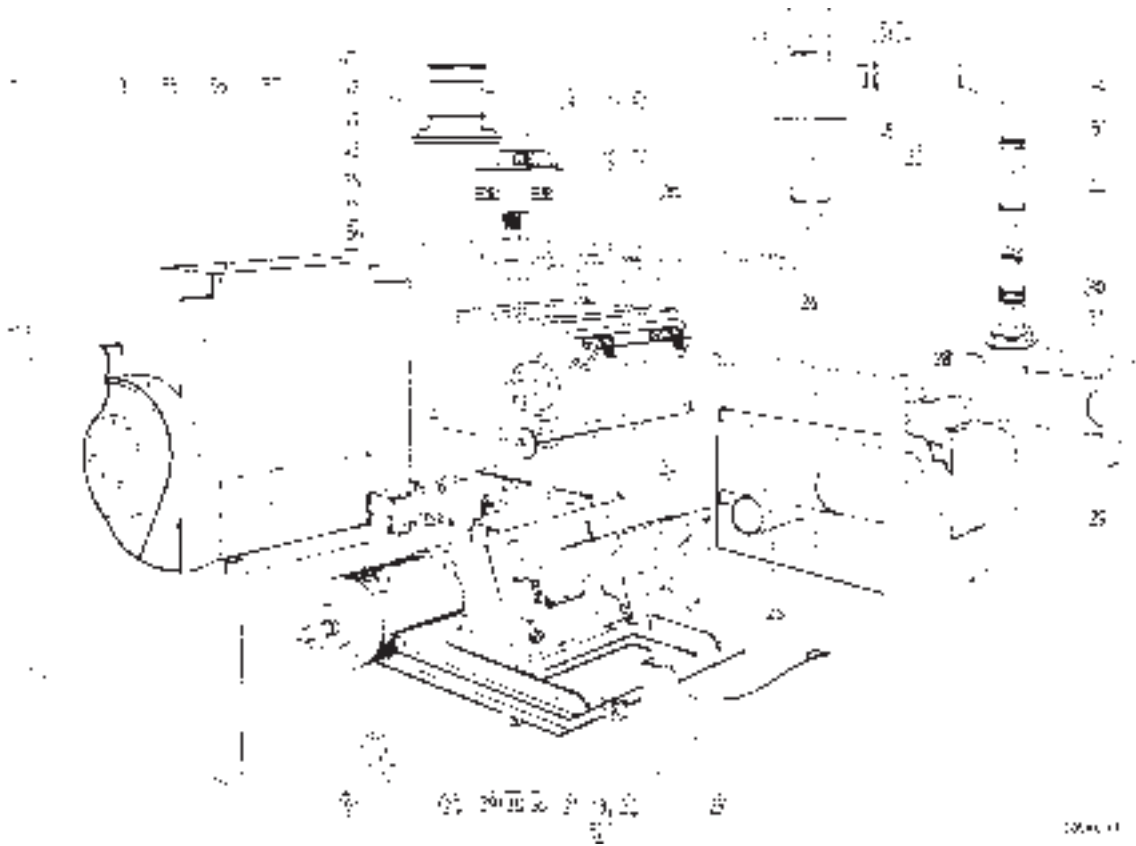
8.1.1 79, Type -K



Pos	Qty.	Part no.	Pos	Qty.	Part no.	Pos	Qty.	Part no.
1	1	3-13212	20a	2	9-50147	31	1	4-09136
3	1	3-02532	20b	2	9-50148	32	1	4-04229
10	1	2-11217	21	1	2-13385	33	1	4-07350
11	2	4-02438	22	2	4-10242	34	2	4-02292
12	2	4-02449	26	1	3-02426	35	1	3-13386
13	2	9-91255	27	1	3-13706	36	2	4-13387
16	1	4-13578	28	1	4-05263	37	1	2-23484
17	2	4-13388	29	1	9-50011	38	1	9-11034
19	1	9-10332	30	1	3-04231	39	1	2-23488

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8.1.2 79, Type -KU



Pos	Qty.	Part no.	Pos	Qty.	Part no.	Pos	Qty.	Part no.
1	1	3-13212	25	1	3-23303	41	2	4-13387
3	1	3-02532	26	1	3-13211	42	1	3-12478
10	1	2-11217	27	1	1-11802	43	1	4-10790
11	2	4-02438	28a	1	9-20206	44	1	4-11762
12	2	4-02449	28b	1	3-14771	46	1	4-11768
13	2	9-91255	29	1	1-11801	47	2	9-20107
15	2	4-13579	30	1	3-13138	48	5	9-20415
16	1	4-13578	32	1	4-11770	49	1	3-10787
17	2	4-13388	33	1	2-10594	50	1	9-20423
19	1	9-10332	34	1	9-20481	51	1	9-70152
20a	2	9-50147	35	1	3-04231	52	2	4-13022
20b	2	9-50148	36	2	4-09136	53	1	3-10590
21	1	2-13385	37	1	4-04229	54	1	9-50095
22	2	4-10242	38	1	4-07530	55	1	2-23484
23	1	3-13209	39	2	4-02292	56	1	9-11036
24	1	2-23302	40	1	3-13386	57	1	2-23488

9. Electrical scheme

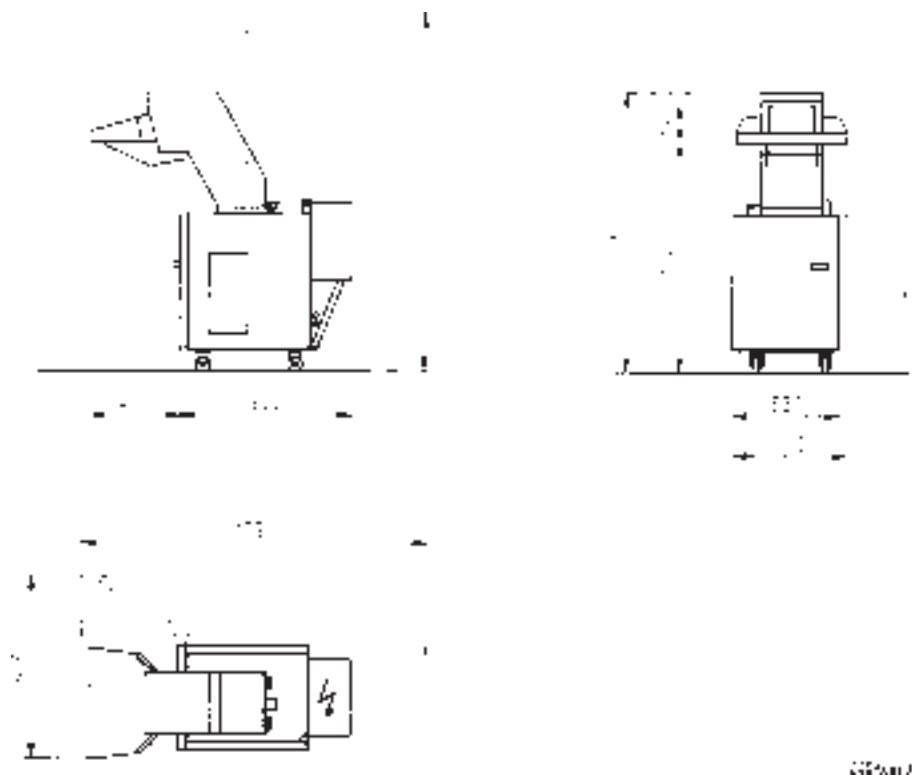
The following components can be included in the standard electrical equipment for granulators in the 79 range.

B1	Paddle monitor for level control
F1	Over-current relay for granulator motor
F2	Over-current relay for blower motor
F3	Over-current relay for band conveyor
F14	Automatic circuit breaker for auxiliary transformer
F15	Glass-tube circuit breaker for auxiliary supply
H1	Pilot light
K1	Auxiliary relay
K2	Main contactor #1
K3	Main contactor #2
K5	Contactors for blower motor
K6	Contactors for band conveyor
K7	Over-current relay
K8	Pause-pulse relay for Air Veyor
Q1	Main circuit-breaker
S1	Emergency stop
S2	Stop button granulator
S3	Start button granulator
S5	Safety switch
S6	Safety switch
S7	Safety switch
P1	Time counter
T1	Auxiliary transformer
T2	Transformer
T3	Auxiliary transformer for metal detector
U1	Metal detector
X1	Connection blocks
X2	Adapter for blower
X3	Adapter for band conveyor
X4	Adapter for metal detector
X5	Adapter for paddle monitor
YV1	Magnetic valve for Air Veyor
Z1	Time delay when starting granulator

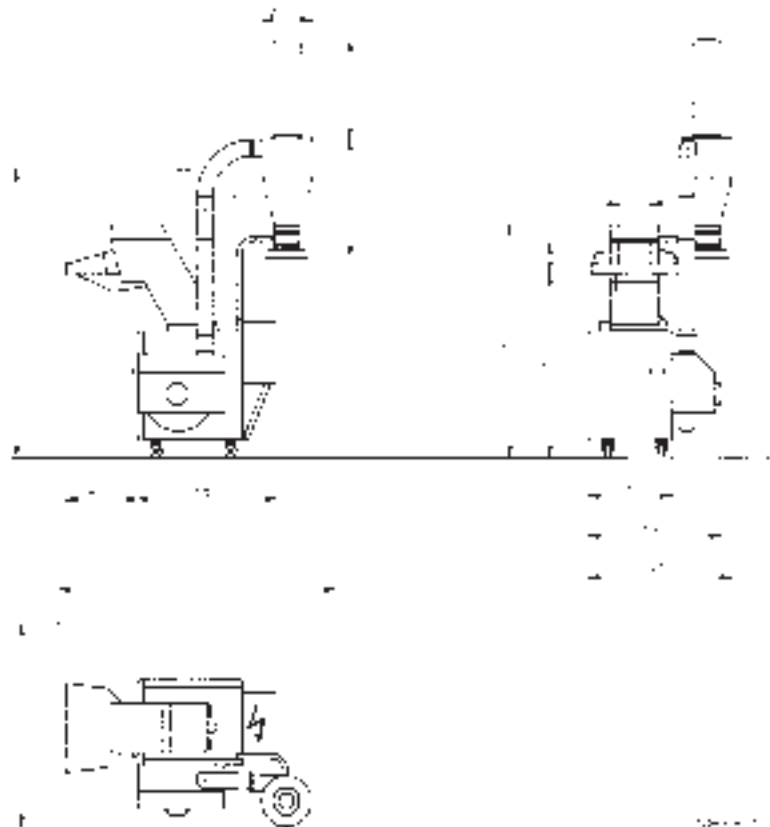
10. Layout

10.1 Dimensions

79



79



11. Options

11.1 General

The descriptions in this chapter refer to granulator model 79, designed for granulating endless edge trimmings with maximum thickness 2 mm and width 60 mm. These values are, however, approximate since the actual quality of the plastic must always be taken into consideration.

11.1.1 Overview

Use only spare parts from CONAIR MARTIN when replacing machine parts. Orders should go to the representative in the country where the machine was purchased.

When ordering, the following should be specified:

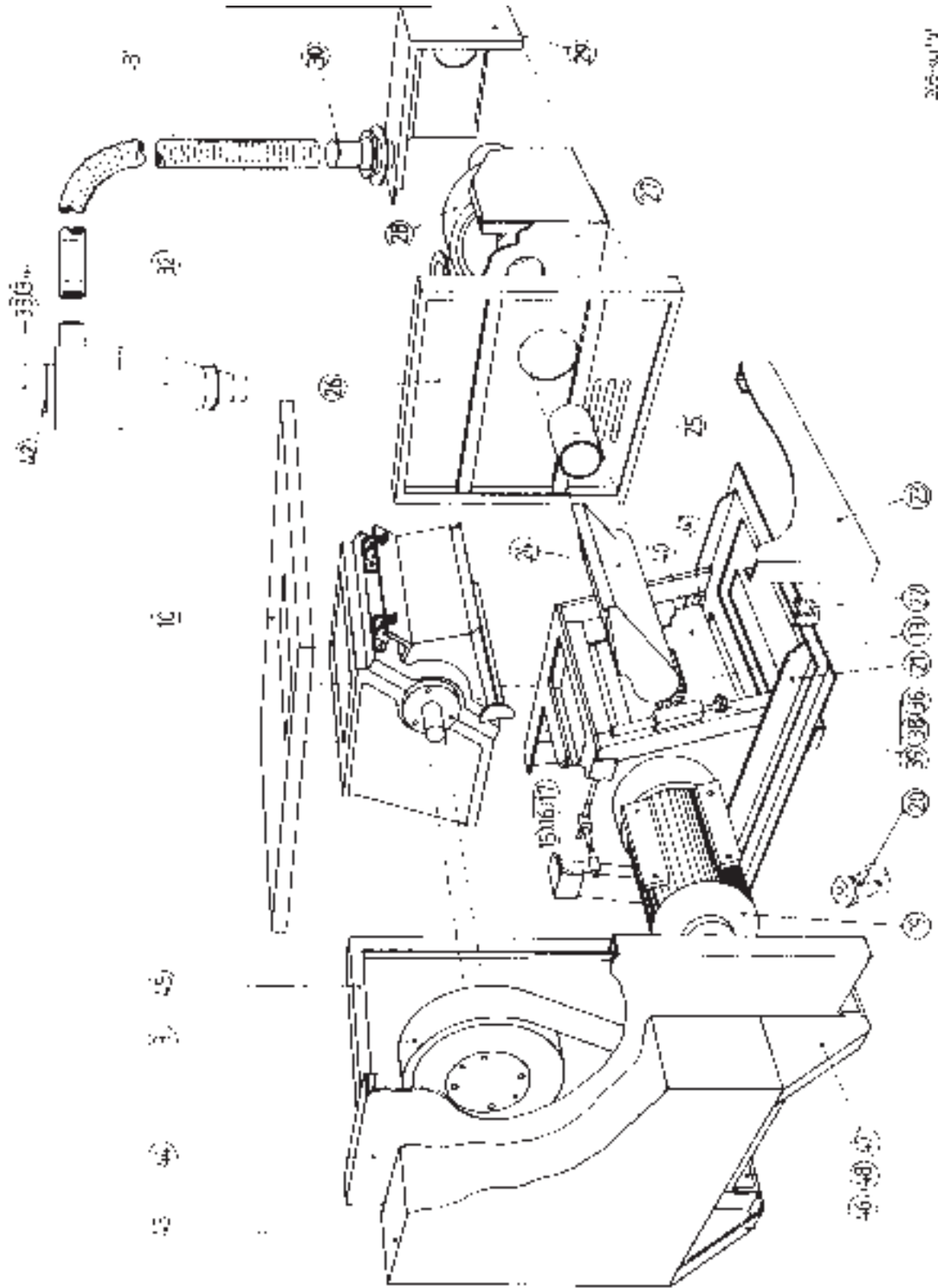
- machine designation, as specified on the machine plate
- serial number, as specified on the machine plate
- article number, as specified in this spare parts list
- quantity, as specified in this spare parts list.

To be as clear as possible, the spare parts list is divided into modules. Each module illustrates a particular part of the granulator.

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11.1.1a 79 with blower F7 and cyclone AX-7,5: Diagram



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11.1.1b 79 with blower F7 and cyclone AX-7,5: Table

Pos	Qty.	Part no.	Pos	Qty.	Part no.	Pos	Qty.	Part no.
3	1	3-02532	24	1	2-23302	36	2	4-09136
10	1	2-12597	25	1	3-23303	38	1	4-07530
13	2	9-91255	26	1	3-13211	39	1	4-02292
15	2	4-13579	27	1	1-11802	40	1	3-13386
16	1	4-13578	28a	1	9-20206	41	2	4-13387
17	2	4-13388	28b	1	3-14771	42	1	3-10590
19	1	9-10332	29	1	1-11801	43		se kap. 9
20a	2	9-50147	30	1	4-06887	44	1	3-23491
20b	2	9-50148	31	1	9-20198	45	1	3-13707
21	1	2-13385	32	1	4-11771	46	1	2-23298
22	2	4-10242	33	1	2-10594	47	1	2-23299
23	1	3-13209	34	1	9-20481	48	2	3-23497

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11.1.2 79: Sharpening the fixed knives



Fig. 1
Initial position

The fixed knives are fastened in their fixed position as shown in the figure above, and the correct relief angle, 20° , is sharpened as shown in the figure to the right.

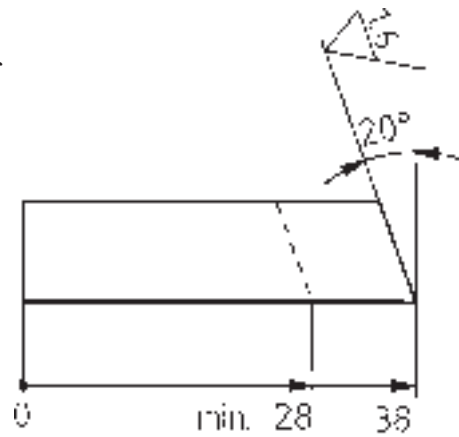


Fig. 2
Sharpening

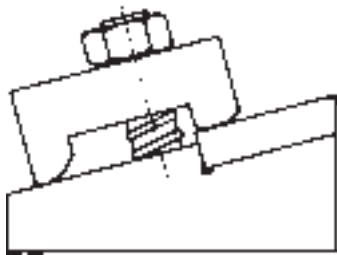


Fig. 3
Final position

Then they are sharpened once again as shown in the figure to the left above, so that the correct cutting angle, 15° , as indicated in the figure to the right, is obtained.

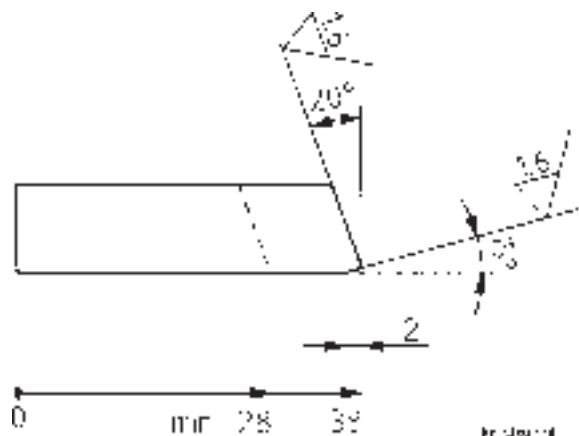
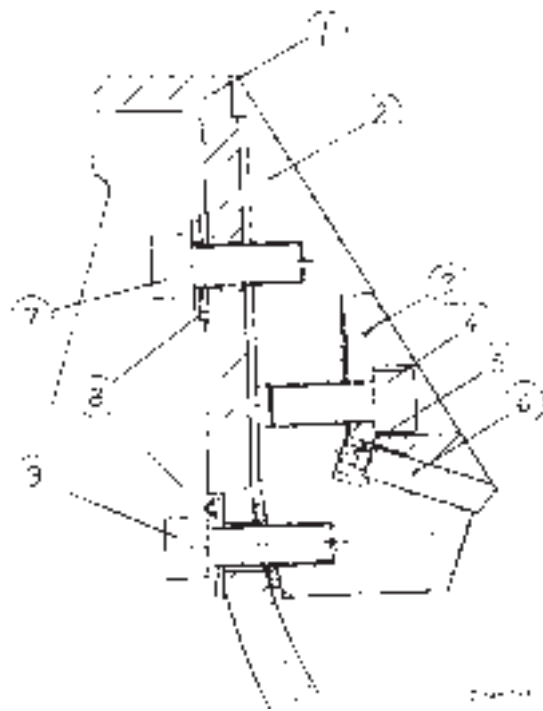


Fig. 4
Final sharpening

11.1.3 79: Third fixed knife, installation and sharpening



Pos.	Qty.	Part no.
1	1	1-19022
2	1	2-17732
3	1	2-17733
4	2	9-40106
5	2	9-40302
6	1	3-17735
7	2	9-40075
8a	2	9-50086
8b	2	9-50214
9	2	9-40050

Disassembling

1. Unscrew the screws (4) and release the ruler (3).
2. Lift out the knife (6).

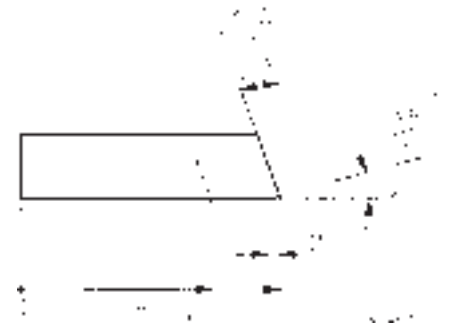
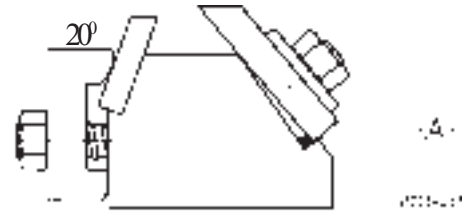
Assembling

1. Clean any grease or plastic waste from the knife location.
2. Position the fixed knife (6) with the adjusting screw (5) and press against the rear edge.
3. Adjust to obtain the correct amount of play between the fixed and rotating knife using the adjusting screws (5).
4. Using a feeler gauge, check that the correct amount of play, 0.15 - 0.30 mm, has been obtained.
5. When the amount of play is correct, place the ruler (3) with the screws (4) on the knife and tighten with a torque of 100 Nm.

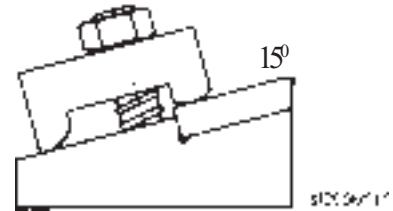
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Sharpening

The third fixed knife is fastened in the left position in the SF 79 fixture and sharpened to its correct relief angle, 20° . See next diagram.



Then the knife is fastened in the SF 79 fixture and is sharpened to its correct cutting angle, 15° . **NOTE:** Turn the knife so that the correct surface is sharpened.



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11.1.4 79, Roll feed RF20, electrical, double pressure rollers

Roll feed RF20 with double rollers is designed to automatically move edge trimmings from sheeting to a granulator for granulating and re-using.

Function

Edge trimmings from sheet production are lead over an outer pair of rollers to a pair of pressure rollers, which feed the trimmings into a granulator for re-using.

The outer pair of rollers sense the amount that the band stretches. The stretching affects the moving rollers (2), which actuates a potentiometer (74). The potentiometer regulates a worm gear unit motor (58/59) and consequently the rollers' rotation speed. This prevents a variable rate in the sheet production from causing the edge trimmings to tear off. Instead, the edge trimmings are fed in at the same rate to the granulator and are transferred, via a blower system, back to production.

If required, the potentiometer can be replaced with an external analogue signal which reflects the sheet line's speed (see chapter 9).

Handling

1. Open the noise protection hood (36).
2. Lead the edge trimmings over the steering rollers (4) and under the liftable guide rollers (16).
4. Start the granulator.
5. Feed the edge trimmings into the hopper opening on part (13) and steer them so that they are gripped by the pressure rollers.
5. The knob on the electrical cabinet is used to regulate the speed of the pressure rollers so that they go slightly faster than the belts. If the pressure rollers go too fast, the hopper unit will not function properly.
6. Check that the edge trimmings are stretched out by the guide rollers and that the feed rate varies in line with the stretching of the belts.
7. Close and lock the noise protection hood (36).

Safety

A safety switch on the roll feed prevents the granulator from starting or running with the roller pack lowered.

Weekly inspection:

- Unscrew the break screws (67) (68) and lower the roller pack, as described in chapter 11.1.4, Cleaning.
- Make sure that the screenbox is closed and the safety switch tightened.
- Press the start button. It should not be possible to start the granulator until the roll feed is also closed and the break screw tightened.

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11.1.4a 79, Roll feed RF20, electrical, double pressure rollers: *Servicing*

CLEANING

1. Raise the hood (36).
2. Unscrew the break screw (67).
3. Lower the loop (54).
4. Raise the roll feeder (13) with the handle on part (9).
5. Clean.

SETTING THE SCRAPER

1. Loosen the nuts on scrapers (30) and (32).
2. Set the correct amount of play, maximum 0.2 mm, between the scraper and roller.
3. The scrapers are moved with a pin stuck through the hole on the shaft's under side.
4. Tighten the screws.

NOTE: The scrapers must not bear against the rollers. The amount of play between the scraper and roller should be checked 4 times a year.

SETTING THE DISTANCE BETWEEN THE ROLLERS

The correct distance — depending on the thickness of the material — is set using screws (44), (41) and (79).

NOTE: The rollers must not be in contact with each other.

ADJUSTING THE SPEED

The speed is regulated from the control panel.

LUBRICATION

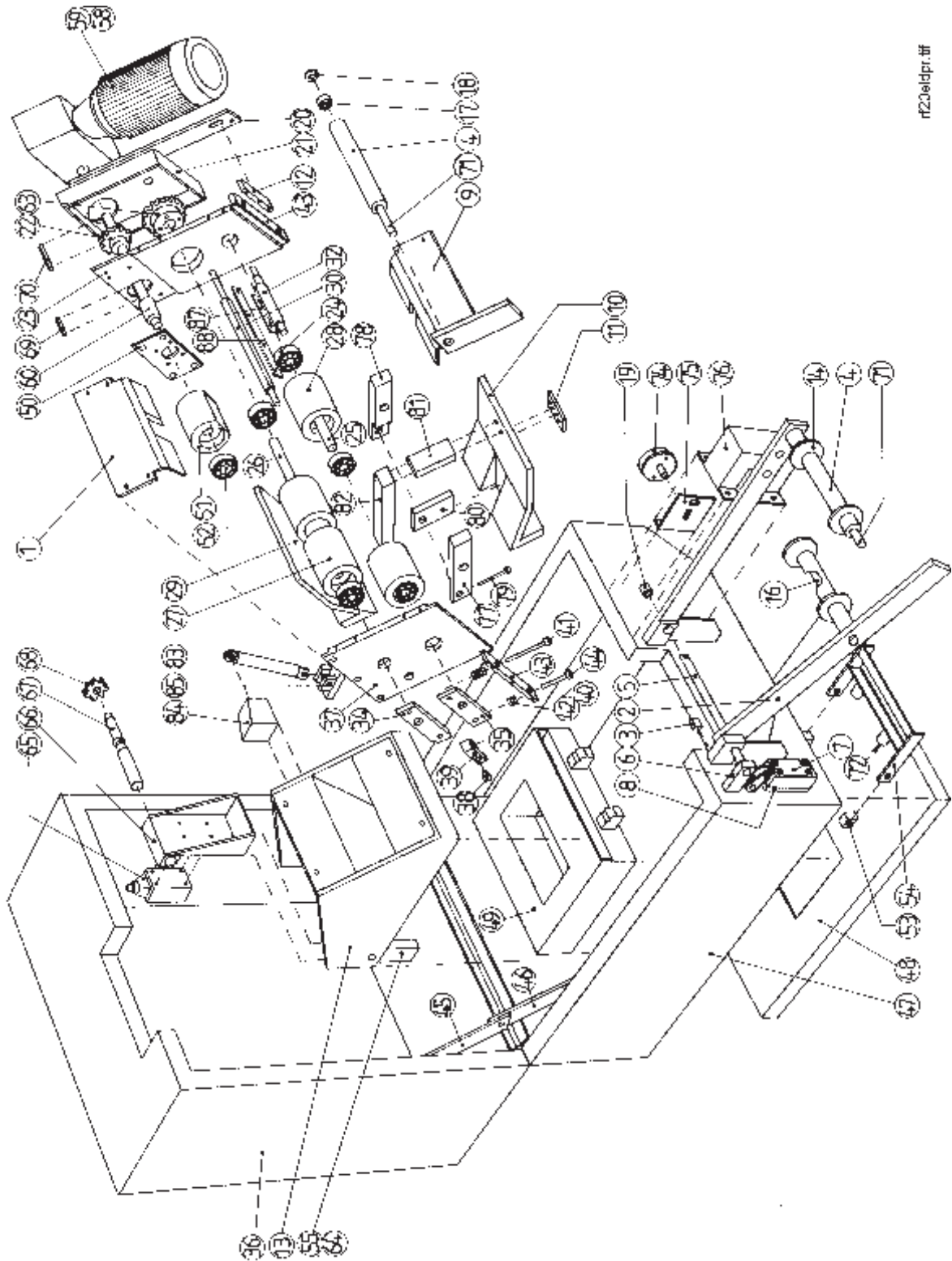
The gear is delivered filled with synthetic oil, Mobil SHC 634, suitable for normal operation. This oil is specially intended for worm gear units. Normally, no oil change is required. In special operating cases — contact CONAIR MARTIN.

Ambient temperature: -30°C — +30°C. Maximum oil temperature +90°C.

GEAR	OIL QUANTITY (litres)
BS 40	0.25
BS 50	0.35
BS 63	0.55
BS 71	0.75

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11.1.4b 79, Roll feed RF20, electrical, double rollers: *Diagram*



rf20eldpr.tif

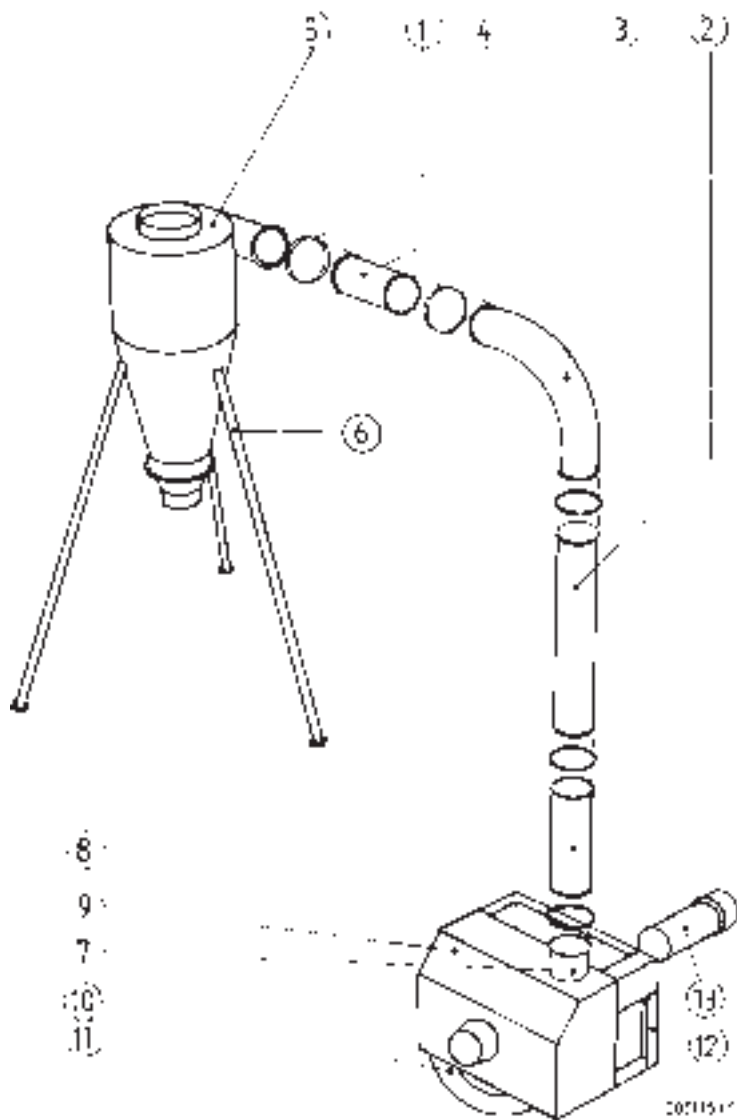
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11.1.4c 79, Roll feed RF20, electrical, double rollers: *Table*

Pos.	Qty.	Part no.	Pos.	Qty.	Part no.	Pos.	Qty.	Part no.	Pos.	Qty.	Part no.
1	1	3-15749	22c	1	9-30126	45	1	3-12571	70	1	9-50301
2	1	2-14829	23	1	3-12376	46	1	4-12584	71	2	4-12413
3	1	4-16390	24	6	9-90150	47	1	1-14810	72	2	9-50168
4	3	4-12412	25	2	4-15743	48	1	2-12597	74	1	9-90668
5	1	4-17310	26	1	3-12379	49	1	1-12569	75	1	4-15753
6	1	4-14826	27	1	3-14839	50	1	3-17219	76	1	3-15752
7	1	9-10573	28	2	4-13913	51	1	4-14823	77	1	4-15744
8	1	4-11575	29	1	2-12374	52	2	9-60045	78	1	4-15745
9	1	2-19026	30	1	3-20624	53	2	4-12579	79	2	4-15750
10	1	3-14837	32	2	4-15742	54	1	3-12572	80	1	4-15740
11	1	4-14841	34	1	4-12389	55	2	4-12580	81	1	4-15739
12	1	4-17495	35	2	4-12390	56	1	4-14822	82	1	4-15741
13	1	1-14814	36	1	1-14813	59	1	9-90573	83	1	9-20622
14	4	4-12137	37	1	3-14828	60	1	3-13730	84	1	4-16385
16	1	4-12427	38	2	4-10176	63	1	4-15747	85	1	4-16386
17	6	9-60089	39	2	4-15751	64	2	9-60105	86	1	4-12578
18	6	4-10195	40	2	9-50299	65	1	9-91255	87	1	4-20625
19	2	9-60106	41	2	9-40576	66	1	3-12598	88	1	3-20626
20	1	3-17496	42	2	9-50300	67	1	4-04235			
21	1	3-14832	43	2	4-12396	68	1	4-02292			
22a	1	4-14827	44	2	9-40300	69	1	9-50348			

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11.1.5 79: Blower F15 with cycloneAX-12



Pos.	Qty.	Part no.	Pos.	Qty.	Part no.
1	5	9-20415	8	1	9-20423
2	1	4-11761	9	1	1-11830
3	1	4-11768	10	1	9-20421
4	1	4-11762	11	1	3-14771
5	1	2-12174	12	1	1-13140
6	1	4-04487	13	1	3-23303
7	1	3-10332			

12. Transporting and storing

12.1 Overview

Handling and transporting of the machinery should be carried out by specially trained personnel.

The machine is packed in weather-proof and partly shock-proof plastic sheeting. It is fixed with straps to a pallet for transportation.

12.1.1 Unpacking and checking

- Check that the machine has not been damaged in transit. Report any damage to the forwarder.
- Do not unpack the machine until it has been moved to its installation location.
- After unpacking, check that the delivery is complete by checking against the delivery note.

12.1.2 Lift and transport to installation location

For information about the machine's weight, refer to chapter 2, Technical data.

For information about the space required, refer to chapter 10, Layout.

The machine can be lifted and handled using a fork-lift truck.

12.1.3 Placing at the installation location

See chapter 5, Installation.

12.2 Storing

Normally, the machine is pre-packed for transport to the installation location where it is to be put into operation immediately. Therefore, it is only protected with rust-preventive oil.

12.2.1 Long-term storage

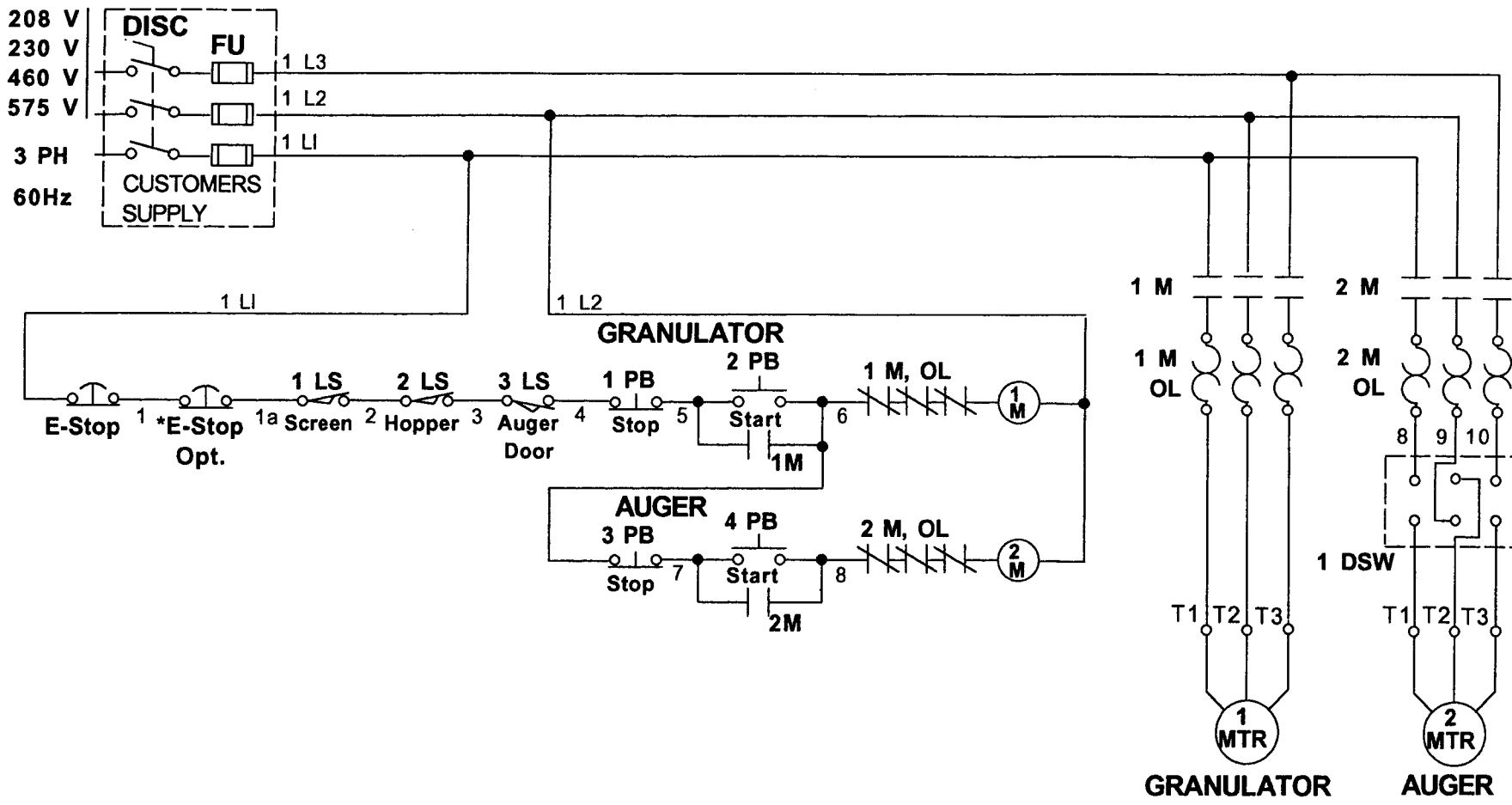
- The machine should be kept in a storage area with constant temperature and humidity.
- Before storing for a long time, the machine should be given a coating of long-term rust preventive, for example Castrol DWX 160 with durability 24 - 36 months in a suitable storage area.

12.2.3 Preservation

The machine is protected with rust-preventive oil Castrol DWX 22 on all surfaces which are not painted or rust-free.

12.2.4 Durability

The rust protection from the rust-preventive oil Castrol DWX 22 is effective for up to 12 months if the conditions described in 12.2.1 are fulfilled.



*REMOTE LOCATION

REV. NO.	LET.	DESCRIPTION	BY	DATE
CONAIR MARTIN <small>Part of The Conair Group</small>				
ELEC. SCHEMATIC				
2 MTR, 230 Thru 460V/3/60				
MACHINE SIZE 79A				
DR. BY	DATE	CHK. BY	SCALE	
HO	08-07-91		NONE	
DWG. NO.			C	SHT. 1 OF 1
C-201-00-0556				